REMARKS

Claims 18-23 have been cancelled in response to the examiner's having held them to be outside the species election. Applicant does not agree with the examiner, but in the interest of expediting prosecution has cancelled them. The right to pursue these claims in a divisional application is reserved.

Copies of the publications that the examiner did not find in the file of the parent are being sought, and will be provided if obtained.

The examiner asked for a more descriptive title. One has been supplied.

The examiner has rejected claims 25 and 26 under 35 U.S.C. 112, first paragraph, as not being supported by an enabling disclosure. The examiner is urged to reconsider and withdraw the rejection. By the examiner's own admission, the Cook triplet anastigmat and symmetric double Gaussian lenses called for in claims 25 and 26, respectively, are well known types of lenses. A patent applicant is not required to include a detailed design in the patent application. Only enough disclosure is required so that one of ordinary skill can practice the invention. It is not experimentation, but straightforward engineering design, that is needed to practice the inventions of these claims. Experimentation comes into play when there is doubt about whether one of ordinary skill could build what is called for by a claim. Here there certainly is no doubt.

The examiner has made the same lack of enablement rejection of claim 28, and applicant has cancelled the claim (without agreeing with the examiner, and without prejudice to submitting evidence in a future continuation application to show that the claim is enabled).

The examiner has rejected claims 17 and 24-28 under 35 U.S.C. 103(a) as being unpatentable over Reddersen in view of Marom '095 and Marom '143 taken with Olmstead. Although the examiner does not refer to claims 29-31 in this rejection, applicant infers from the examiner's rejection of those claims on the summary sheet, and from the discussion of the rejection, that the examiner intended to include them in this patentability rejection.

The examiner is urged to reconsider and withdraw the patentability rejection. The independent claim (29) has been amended to require that the bar code reader be an imaging device, in which the field of view is imaged onto a sensor (e.g., a CCD sensor).

As amended the claim calls for a combination of elements not found or suggested in the prior art. The optics taught in Reddersen do not include "an axicon element shaped and positioned to extend the working range". The wedge sections taught in Reddersen are not an axicon, which is an optical element that has no definite focal length, but instead produces a line image lying along the axis from a point source of light. Reddersen makes it clear that the wedge sections focus the beam at a prescribed waist location. Marom '143 and Marom '095 teach the use of axicons but not for the purpose of extending the working range of an imaging scanner in which the field of view is imaged onto a sensor. Marom '143 and Marom '095 rely on axicons to shape the spot size of a laser beam scanned back and forth over a bar code symbol. Olmstead teaches the use of a multifocal lens similar to Reddersen; there is no suggestion of the use of an axicon.

Accordingly, all of the pending claims are in condition for allowance. Attached is a marked-up version of the changes being made by the current amendment. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 9/20/01

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Version with markings to show changes made

In the claims:

Cancel claims 18-23, 28 and 30.

Amend claims 29, 30 as follows:

29. (Amended) Light collection optical elements for a bar code scanner, the light connection elements positioned to collect light reflected from a bar code symbol, the light collection optical elements comprising [a light sensing] an imaging element and a collection lens for collecting light reflected from the bar code symbol and directing [the light to the light sensing] an image of the bar code symbol onto the imaging element, the collection lens comprising an axicon element shaped and positioned to extend the working range over which the bar code symbol can be resolved by the [sensing] imaging element.

31. (Amended) The light collection optical elements of claim [30] 29 wherein the imaging element is a CCD device.